Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
The Development of Operational, Technical	)	WT Docket No. 96-86
and Spectrum Requirements For Meeting	)	
Federal, State and Local Public Safety	)	
Agency Communication Requirements	)	
Through the Year 2010	)	
	)	
Establishment of Rules and Requirements	)	
For Priority Access Service	)	

Reply Comments of Ericsson Inc.

Ericsson Inc. ("Ericsson") hereby submits its reply comments in the Second Notice of Proposed Rulemaking ("Second NPRM") in the above-captioned proceeding.[1] In support of its reply comments, Ericsson states as follows:

In its original comments in this proceeding and consistent with the PSWAC Final Report, Ericsson supported an allocation of 2.5 MHz of the spectrum in the 746-806 MHz band for interoperability purposes to be used predominately for voice and data.[2] Further, Ericsson argued that for purposes of the interoperability spectrum, the Commission should mandate analog FM as the transmission standard since analog FM is a well understood and robust transmission technology that is widely available at low cost. Use of analog FM for the interoperability spectrum has significant advantages over digital transmission, including

[1] *In the Matter of the Development of Operational, Technical and Spectrum Requirements For Meeting Federal, State and Local Public Safety Agency Communication Requirements Through the Year 2010, Establishment of Rules and Requirements for Priority Access Service,* Second Notice of Propose Rulemaking, FCC 97-373 ___ FCC Rcd ___ (Released October 24, 1997) ("Second NPRM").

[2] Ericsson did not support the use of interoperability spectrum for high speed data, image or video due to the increased complexity of such uses.

the fact that it is a simple technology; use of analog FM avoids lengthy standards setting procedures; and, use of analog FM avoids disputes over intellectual property rights. Similarly, in its original comments Ericsson did not support the use of trunking for the interoperability band[3] because it asserted trunking would unnecessarily increase the complexity of use and cost of equipment to be used in the interoperability band.

Ericsson's view is premised on a number of factors. For example, any digital standard adopted for the interoperability portion of the 746-806 MHz band is likely to be in place well into the future. As a result, the choice of a digital standard has to be based not simply on the needs of the public safety community at the present time. It has to take into consideration the needs of the public safety community in the future. Unfortunately, deliberations and debate in the standards setting process to fully evaluate the needs of public safety into the future will take significant time. Even more unfortunate is that the need for interoperability spectrum for public safety users is immediate and time to adopt a digital interoperability standard can not be taken if the interoperability spectrum proposed to be allocated in this proceeding is to be effectively made available to the public safety community in the near term.

To the extent the Commission chooses to allow the use of digital technology for the interoperability band, Ericsson argued that any digital standards adopted should be adopted through processes which ensure due process to all interested parties. The best manner of providing procedural and substantive due process for digital standards for the interoperability spectrum in the public safety band, would be for the Commission to

[3] Ericsson manufactures digital trunked radio equipment and certainly understands the benefits that can be obtained by the use thereof. Nonetheless, for the interoperability spectrum only, Ericsson does not believe trunked equipment presently serves the public interest.

establish an Advisory Committee pursuant to the Federal Advisory Committee Act. In the alternative, if the Commission does not deem it appropriate to establish an Advisory Committee to adopt interoperability standards for the public safety band, Ericsson supported digital standards for the public safety interoperability band being adopted by an ANSI-accredited standards organization. Finally, if the non-accredited standards organizations are allowed to adopt digital standards for the interoperability portion of the 746-806 MHz band allocated for public safety, Ericsson fully supported Commission adoption of rules similar in concept to those proposed to be adopted as a result of Section 273(d)(4) of the Communications Act of 1934.

Consistent with its view of the need for due process, Ericsson argued that after the Commission establishes a national framework for the interoperability spectrum in the 746-806 MHz band (*viz.*, 2.5 MHz of spectrum using analog FM transmission technology and a common channel spacing scheme, common nomenclature for the use of the interoperability spectrum and common operating procedures), it should allow state and local emergency agencies to adopt plans for the use of the interoperability spectrum in time of emergency. State and local emergency agencies of the various states are bound by certain procedural rules in making decisions relating to the public welfare and are in the best position to determine the individualized needs of the various public safety agencies responding to a local emergency.

Many of the parties that filed comments in this proceeding fully supported the concepts expressed by Ericsson. Specifically, numerous commenters supported the concept that the FCC should establish a national framework for the operation of

interoperability spectrum with state and local agencies making individualized decisions.[4] Numerous parties supported the use of analog FM technology as the transmission technology of choice for the interoperability portion of the 746-806 MHz band.[5] A substantial number of parties did not believe trunking was appropriate to use in the interoperability band or that high speed data, image and/or video were appropriate uses of the interoperability band.[6]

As a result, Ericsson asserts that the comments filed in this proceeding clearly demonstrate that prospective public safety licensees, end users and manufacturers support a limited allocation of interoperability spectrum for the 746-806 MHz band which uses simple inexpensive analog FM technology to accommodate voice and data services. This will result in the introduction of inexpensive, simple analog FM equipment which can be easily deployed and used in emergency situations all of which will inure to the benefit of the public.

In the initial comments filed in this proceeding Ericsson recommended a 6.25 kHz equivalent spectrum efficiency standard for the general use public safety spectrum in the 746-806 MHz band. Some parties have apparently misinterpreted this proposal as an

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[4] See, comments of American Association of State Highway and Transportation Officials; Joint Comments of American Association of State Highway and Transportation Officials, Forestry Conservation Communications Association, International Association of Fish and Wildlife Agencies, International Municipal Signal Association and National Association of State Foresters ("Joint Commenters"); City of Richardson, Texas and National Public Safety Telecommunications Council.

[5] See, comments of City of Richardson, Texas; NPSPAC Regional Review Committee, Region 49; State of Florida, Bureau of Wireless Communications and National Telecommunications and Information Administration.

[6] See, comments of California Public Safety Radio Association; Commonwealth of Pennsylvania; NPSPAC Regional Review Committee, Region 49; State of Florida, Bureau of Wireless Communications; National Public Safety Telecommunications Council.

Ericsson recommendation for 6.25 kHz channelization spacing. This is not correct. The intent of Ericsson's proposal was to require an efficiency standard of one voice path, or in the case of data equipment, an appropriate data rate, per 6.25 kHz of occupied bandwidth in the general use portion of the public safety allocation. Furthermore, Ericsson believes that such an efficiency requirement should be required as soon as possible, but in any case certainly well before the mandated date of January, 2005 for the refarmed channels below 512 MHz. These recommended efficiency requirements could be satisfied either by using 6.25 kHz equipment operating on channels that are spaced 6.25 kHz apart or 6.25 kHz channels resulting from the disaggregation of a wider channel, or by using appropriate multiple access techniques such as TDMA which provides the appropriate number of paths in wider channels. Ericsson's preference is 12.5 kHz channelization, but the rules must allow for disaggregation to narrower bandwidth systems and aggregation for wider bandwidth systems.

Frequency coordination of the interoperability spectrum is not necessary if the Commission adopts the proposals set forth above by Ericsson and others. Frequency coordination does become an important concept for the general use spectrum in the 746-806 MHz band. Consistent with its general view that telecommunications markets should be competitive, Ericsson submits the frequency coordination process should likewise be competitive. Rather than naming certain coordinators as the exclusive coordinators for certain portions of the public safety spectrum, Ericsson supports the concept that all organizations engaged in the process of coordination should be able to provide coordination services for all public safety licensees. This will provide competition in the market resulting in lower overall costs for public safety licensees to deploy new or

modified systems. This will be especially helpful as budgetary constraints continue to serve as a deterrent to implementation of new public safety systems.

In general, Ericsson supports the overall approach and the minimal technical/operation rules proposed by Motorola for the general use spectrum. It believes the approach outlined should promote efficient use of the spectrum. Further, the approach appears to be based on thorough and solid technical analyses.

The proposed partitioning, within each 12 MHz block, of 7 MHz for integrated voice/data operations and 5 MHz for wideband operations appears reasonable. Although targeted for wideband data operations such as imaging and video in the 5 MHz segment of the band, Ericsson suggests that voice not be excluded from this segment. Voice may well be part of a wideband technology/product that could provide efficient customer solutions in this segment of the band.

As outlined in its comments above, while Ericsson prefers 12.5 kHz channeling, it can support the proposed channel building block approach with building block increments of 6.25 kHz in the integrated voice/data segment and 100 kHz in the wideband segment. Ericsson's support of this proposal is predicted on the adoption of rules that routinely allow aggregation of blocks on a frequency coordinated basis as needs dictate in order to accommodate multiple technologies and multiple users' needs.

Ericsson also supports the overall proposed interference specification approach based on the industry-preferred concept of "coupled power" rather than the historical use of emission mask requirements. As indicated by Motorola, the proposed specifications define requirements that more directly relate to overall system design parameters and

should result in systems that operate with more predictable and lower levels of interference.

While Ericsson supports the overall approach and the minimal technical/operations rules proposed by Motorola, the short time period allowed for reply comments has not allowed Ericsson to conduct the thorough analysis necessary for a full understanding of the Technical Recommendations Appendix. The detailed analysis included in the appendix plus other more detailed supporting analyses which were not included in the appendix which are necessary to justify the specific requirement values recommended by Motorola (particularly the coupled power requirement versus frequency offset) are somewhat complex and will require more time to understand. Before Ericsson can endorse the specific values proposed by Motorola or provide further comment, it must develop a more thorough understanding. Ericsson strongly suggests that further technical dialogue continue in a working group format involving all interested parties to achieve industry consensus on what values will best serve the needs of public safety.

Respectfully submitted,

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January 26, 1998

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